

Chapter 6

PTS TRAINING AND DOCUMENTATION

To obtain detailed knowledge of all PTS subjects, a Training and Documentation package has been developed. This package ranges in scope from the basic information necessary for people with no knowledge of the system to the advanced and very detailed information required by the software specialist. To cover this very wide range of information, the package has been developed as a number of modules.

Figure B.2 in Appendix B shows a list of all training and documentation modules currently available for the CREDIT programmer. It is reproduced in the Preface of every PTS manual.

6.1 Module Types

The package contains three types of module:

- Reference Manuals
- Training Manuals
- Training Modules

The Reference Manuals contain detailed information about such things as syntax rules for language statements or parameters for running a utility. They are intended to provide the complete facts about PTS for the experienced programmer and to support the Training Manuals and Training Modules. They are not intended to be self-explanatory for a newcomer to PTS, so the Training Manuals and courses provide guidance in their use.

The Training Manuals take the form of Programmers Guides. They are intended to show the programmer how to use the facilities defined in

the Reference Manuals to achieve the results he wants. They provide descriptions of the way the various software components work and provide cross-references to the relevant Reference Manuals. They are intended to be used by inexperienced programmers, or by experienced programmers who need to know more information about parts of the system they have not used before.

The Training Modules form a basis for a series of courses on PTS equipment, its programming and use. These courses make extensive use of the Reference Manuals and Training Manuals (the Programmers Guides) and thus provide experience with their use.

The Training Modules shown in Figure B.2 are not necessarily usable independently. Each course normally makes use of a combination of these modules.

6.2 CREDIT Application Development

When writing a CREDIT application program, two types of information are required: information about CREDIT itself, and about the DOS-PTS operating system.

6.2.1 CREDIT

The CREDIT Reference Manual, Module M4A, provides detailed information about each CREDIT statement, its syntax and an example of the way the statement should be coded.

The Reference Manual does not provide examples of sequences of instructions to solve particular problems, or general information about the PTS system. This type of information is available in the PTS Programmers Guide, a series of modules providing information on different aspects of programming for PTS applications:

- Module M21A is called Elementary CREDIT. It supplies information about the statements likely to be found in any CREDIT application, as well as more detailed information about the programming of each of the devices that may be connected to the system.
- Module M22A is called Workstation Handling. It gives details of two more-advanced methods of handling screens and keyboards in a CREDIT application, Format Input/Output Control and Screen Management.
- Module M23A is called Disk File Handling. This module gives details of the three Data Management packages available in CREDIT.

Finally, a quick reference summary of the CREDIT language is provided as Module M91A, the CREDIT Reference Card.

A course in CREDIT programming may make use of several training modules. Assuming the students have no prior knowledge of either CREDIT or PTS, such a course may begin with module M100, an Introduction to PTS. This may be followed by modules M110, Introduction to CREDIT and M111, Elementary CREDIT. Modules M21A, Introduction to Workstation Handling, and M22A, Multitasking in CREDIT may also be included. Further modules

dealing with such subjects as disk file handling and workstation handling may be included at this stage or may be left until later, when the students have more experience with CREDIT.

6.2.2 DOS-PTS

Information about the DOS-PTS operating system is contained in Module M11A, the DOS-PTS Reference Manual. This manual contains the detailed syntax of all the DOS-PTS commands and descriptions of the processors used in creating an application for a PTS computer, such as the CREDIT Translator, the CREDIT Linker and the Linkage Editor.

For quick-reference information about the DOS-PTS and TOSS operating systems, Module M90A, the Programmers Reference Card, is available.

Training modules M130, Introduction to DOS-PTS and M131, DOS-PTS, give details of the DOS-PTS operating system. This may be given as a 'free-standing' course, or may be given as part of a CREDIT course.

6.3 Generating the TOSS Monitor

Details of the program SYSGEN, used to generate the TOSS Monitor, are contained in Module M12A, Monitor Generating and Configuration. This manual also contains details of the Configuration Data necessary to configure the tasks within the TOSS Monitor at run time.

A number of software routines to control the hardware devices in the system are contained within the Monitor. These routines are known as the Device Drivers, and details of these Drivers are available in Module M5A, the Device Drivers Reference Manual.

Training modules M140 (Introduction to Monitor Generation) and M141 (Monitor Generation and Configuration) give details of how to run the SYSGEN program and how to configure the system. They may be given as part of a more general course.

6.4 Data Communication

Training and documentation modules provided for data communication subjects range from the basic level of introductory courses and manuals to the specific software requirements and capabilities of the PTS system itself.

Module A13, Introduction to Data Communication, provides an introduction to data communication principles and terminology.

Details of the CREDIT statements available for data communication are in Module M4A, the CREDIT Reference Manual. More detailed explanations of the use of these statements will be found in the Programmers Guide for Data Communication, Module M24A.

Details of the Drivers available for the various data communication protocols can be found in Module M15A, the Data Communication Drivers Reference Manual.

A standard software package is available to allow a PTS computer to simulate an IBM3270 terminal. Details of the generation and use of this package may be found in Module M19A, the IBM3270 Simulator Reference Manual.

Training modules available for data communication include modules A100 to A102 (Introduction to Data Communication) and A110 (Introduction to Networks). On PTS subjects, module M171 covers Data Communication in CREDIT and M172 the IBM3270 Simulation Package.

6.5 Testing

The main tool used for testing a CREDIT application is the CREDIT Debugger. Details of the Debugger commands may be found in the CREDIT Reference Manual.

For creating and maintaining disk files under TOSS, a series of utilities are available. Details of these utilities are in Module M8A, the TOSS Utilities Reference Manual.

6.6 Use of Documentation Modules in the Development Process

When writing a CREDIT application, information is required at several levels. An experienced CREDIT programmer would probably only need the CREDIT Reference Card to check syntax rules for individual statements, with occasional reference to the Reference Manual for more complex or infrequently-used statements. A less experienced programmer, or an experienced programmer working in a new situation, may need to refer to the Programmers Guide for more detailed explanations of the statements, or to find out which statements to use to solve a particular problem.

Once the application has been written and is being tested, similar information is again often required. In this situation, the Reference Cards can usually supply the necessary facts (e.g. the correct syntax for a particular statement in the case of a syntax error), although reference to the relevant manual may be necessary in some cases.